Selling the Aether – A New Billing Schema for Mobile Advertising

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Abstract: The ubiquity and personalization of mobile phones makes them a promising platform for advertising. Currently, practices known from online advertisement can be adapted, e.g. content-aware ads. However, location as a special feature requires further refinements for mobile advertising. In this paper, we present a conceptual proposal of a billing schema for location-aware advertising. The introduced model describes the pricing of mobile ads related to the spatial distribution of their advertising strength.

1 Introduction

Mobile computing has become an omnipresent issue in nowadays information technology. The processing power of handheld devices is still steadily increasing and mobile connectivity is becoming faster, cheaper and more reliable. In addition, the penetration of devices with embedded sensing capabilities is rising, especially for geographic positioning. Our everyday environment is already pervaded with a high density of these devices. Such mobile and personalized always-on devices provide a new platform for advertising.

Today, a conventional ad is an audio-visual representation of an advertising message placed at a certain location on a specific medium (e.g. billboard, TV spot, radio spot). In this paper – in contrast – we propose a pervasive ad to be a digital audio-visual representation of an advertising message bound to a certain context. This defines the situation the ad should appear in, i.e. the location of the ad, the time span for advertising and the current activity of a customer.

In conventional advertising there is a trade off between the costs for an ad and the number of people who can be reached. Therefore the aim is to minimize the costs and maximize the revenue by focusing on people who will possibly buy the good. An advantage of pervasive advertising – in contrast to conventional advertising – is the possibility of a more precise targeting. In a pervasive computing environment a large knowledge base about people is available, either explicitly by user input or implicitly by sensing and reasoning. Therefore a deeper targeting can be done by profile-based and context-aware filtering. For instance, an ad for fishing equipment would certainly reach people not interested in fishing, although the advertisement was localized near to the coast by choosing a local newspaper or radio channel. However, whereas in conventional advertising the problem of flooding is naturally regulated by a billing schema that evolved over time, in digital advertising the number of appearances of an ad does not relate to costs on the advertiser's side a priori.